

SECTION 7: APPENDICES

APPENDIX 1: DATA SOURCES

This report uses data from behavioral risk factor surveys, hospital discharge records and death certificates to study patterns and trends in injuries among Ohio residents. The following is brief summary of each data source referenced in this report.

Cost of Injuries

The medical and work loss cost of injuries was estimated by the Centers for Disease Control and Prevention (CDC). Cost estimates for fatal and non-fatal injuries can be queried on the CDC's Web-based Injury Statistics Query and Reporting System Web (WISQARS).

http://www.cdc.gov/injury/wisqars/pdf/WISQARS_Cost_Methods-a.pdf

Death Records

Death records are maintained by ODH's Office of Vital Statistics. Death certificates provide limited information about circumstances of injury circumstances or contributing factors. Both injuries and their external causes were classified according to the 10th Revision of the International Classification of Diseases (ICD-10). See Appendix 3 for a complete list of external cause of injury codes by mechanism and intent.

<http://dwhouse.odh.ohio.gov/datawarehousev2.htm>

Hospital Discharge Records

Hospital discharge records are collected and maintained by the Ohio Hospital Association (OHA) from information provided by member hospitals. Both injuries and their external causes were classified according to the 9th Revision of the International Classification of Diseases, Clinical Modification (ICD-9-CM). For hospitalizations, a case was defined as an Ohio resident with an injury listed in the primary diagnosis field. For ED visits, a case was defined as an Ohio resident with an injury listed in the primary diagnosis field or a valid external cause of injury code any of the 15 diagnosis fields. Injury mechanisms for both hospitalizations and ED visits were based on the first listed external cause of injury. See Appendix 2 for a complete list external cause of injury codes by mechanism and intent.

<http://www.ohanet.org/>

Leading Causes of Death

The data source for WISQARS Fatal Injury Data is the National Vital Statistics System (NVSS) operated by the National Center for Health Statistics. WISQARS provides death counts and death rates for the United States and by state, county, age, race, Hispanic ethnicity, sex, and leading cause of death, injury intent, and injury mechanism categories. WISQARS can be used to query death data for the years 1999 - 2009, of which the underlying cause of death is specified using ICD-10 codes.

http://www.cdc.gov/injury/wisqars/leading_causes_death.html

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Ohio Behavioral Risk Factor Surveillance System (BRFSS)

The Ohio Behavioral Risk Factor Surveillance System (BRFSS) is a random digit dial telephone survey of non-institutionalized adults aged 18 years of older. The BRFSS has been conducted annually by the Ohio Department of Health since 1984. The survey collects information on the prevalence of health behaviors, health care usage, and disease diagnosis associated with the leading cause of disease, injury and death in the United States. Results from the survey are weighted to represent the age, sex, race, and ethnic composition of Ohio.

<http://www.odh.ohio.gov/healthstats/brfss/behrisk1.aspx>

Ohio Population Estimates

The National Center for Health Statistics releases bridged-race population estimates of the resident population of the United States for use in calculating vital rates. These estimates result from bridging the 31 race categories used in Census 2000 and Census 2010. The bridged-race population estimates are produced under a collaborative arrangement with the U. S. Census Bureau.

http://www.cdc.gov/nchs/nvss/bridged_race.htm

Ohio Pregnancy Risk Assessment Monitoring System (PRAMS)

The Pregnancy Risk Assessment Monitoring System (PRAMS) is a population-based survey designed to examine maternal behaviors and experiences before, during and after a woman's pregnancy, and during the early infancy of her child. The Centers for Disease Control and Prevention initiated PRAMS in 1987 in an effort to reduce infant mortality and the incidence of low birth weight. PRAMS were implemented in Ohio in 1999.

<http://www.odh.ohio.gov/healthstats/pramshs/prams1.aspx>

Ohio Traffic Crash Reports

The Ohio Department of Public Safety compiles statistical data on crashes that occur on Ohio's roads and highways. Crash data is available in the form of annual reports. Users can also develop customized queries of the data online.

http://ohiohighwaysafetyoffice.ohio.gov/otso_annual_crash_facts.stm

Ohio Youth Risk Behavior Survey (YRBS)

The Ohio Youth Risk Factor Survey (YRBS) is an anonymous paper and pencil survey of high school students enrolled in public and non-public schools. The YRBS has been conducted in Ohio since 1993 and is collaborative project between the Ohio Departments of Education and Health. The survey collects information on the prevalence of health behaviors, health care usage, and disease diagnosis associated with the leading cause of disease, injury and death in the United States. Results from the survey are weighted to represent the age, sex, race, and ethnic composition of Ohio.

http://www.odh.ohio.gov/odhprograms/chss/ad_hlth/youthrsk/youthrsk1.aspx

APPENDIX 2: ANALYTIC METHODS

This analysis was limited to descriptive statistics, which were generated through the use of Statistical Analysis System (SAS) Version 9.1, Cary, N.C. The data were analyzed using injury surveillance guidelines from the Centers for Disease Control and Prevention (CDC).

Deaths:

- Injury deaths were defined as a death with the underlying cause of death listed as an injury. Traumatic brain injury deaths were defined as deaths with an injury as underlying cause of death and a traumatic brain injury listed in one of the multiple cause of death fields. See Appendix 4 for a list of ICD-10 codes for injury mechanisms and Appendix 6 for a list of mechanism subcategories.
- Deaths included in this report were restricted to Ohio residents.
- Rates were calculated by dividing the number of injuries by the number of Ohio residents. Population estimates were based on estimates from the National Center for Health Statistics. Rates were age adjusted to the 2000 U.S. standard population.

Hospitalizations:

- Discharge dataset includes nonfederal, acute care, or inpatient facilities. The dataset does not include Veterans' Affairs and other federal hospitals, rehabilitation centers, or psychiatric hospitals.
- Injury hospitalizations were defined as an inpatient visit with an injury listed in the primary discharge diagnosis field. See Appendix 5 for a list of ICD-9-CM codes for injury mechanisms and Appendix 7 for a list of mechanism subcategories.
- Datasets include readmissions, transfers, and deaths occurring in the hospital.
- Hospitalizations included in this report were restricted to Ohio residents.
- The external cause of injury code used in the analysis was the first listed cause of the discharge diagnosis fields. If the codes E000-E030, E849, E967, E869.4, E870-E879, or E930-E949 were the first listed codes then the next valid external cause code was used.
- Rates were calculated by dividing the number of injuries by the number of Ohio residents. Population estimates were based on estimates from the National Center for Health Statistics. Rates were age adjusted to the 2000 U.S. standard population.

Emergency Department Visits:

- Discharge dataset includes nonfederal, acute care, or inpatient facilities. The dataset does not include Veterans' Affairs and other federal hospitals, rehabilitation centers, or psychiatric hospitals.
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- Injury ED visits were defined as an ED visit with an injury listed in the primary discharge diagnosis field or a valid external cause of injury code in any of the discharge diagnosis fields. See Appendix 5 for a complete list of ICD-9-CM codes.
- ED visits included in this report were restricted to Ohio residents.
- Persons who are treated at an ED and later admitted to a hospital are removed from the ED dataset, and therefore are not included in any analysis of ED data.
- The external cause of injury code used in the analysis was the first listed cause of the discharge diagnosis fields. If the codes E000-E030, E849, E967, E869.4, E870-E879, or E930-E949 were the first listed codes then the next valid external cause code was used.
- Rates were calculated by dividing the number of injuries by the number of Ohio residents. Population estimates were based on estimates from the National Center for Health Statistics. Rates were age adjusted to the 2000 U.S. standard population.

Trend Analysis for Deaths, Hospitalizations and Emergency Department Visits:

- Trend analysis for annual injury death, hospitalization, and ED visit rates was conducted in Microsoft Excel. Annual injury rates were plotted and a linear trend line was drawn to minimize the distance between the trend line and data point. The goodness of fit for the linear trend line was determined by the R-squared value. Linear trends were defined as a trend line with an R-squared value of 0.5 or higher. Non-linear trends were defined as a trend line with an R-squared value of less than 0.5. The slope and goodness of fit of the trend line were reported in the data tables. Non-linear trends were labeled with (NL) next to the slope.

Poverty Status and County Urbanity Classifications:

- County urbanity was derived from county of residence reported by Ohio Behavioral Risk Factor Surveillance System respondents. County urbanity classifications were based on a combination of proximity and connectedness to urban core economic development area and definitions of Appalachian counties established by the Appalachian Development Commission. See Appendix 11 for a map with county classifications.
- Poverty status was derived from household income and household composition reported by Ohio Behavioral Risk Factor Surveillance System respondents. Respondents were grouped into categories based on the 2010 Federal Poverty Guidelines. See Appendix 12 for household income and composition thresholds.

Cost of Injuries:

- Fatal Injury costs were calculated by multiplying the number of injury deaths in Ohio by the average cost associated the death for Ohio published on the CDC's
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WISQARS website. See Appendix 8 for average cost estimates by mechanism and intent.

- Non-fatal injury costs for hospitalizations were calculated by multiplying the number of hospitalizations by the average cost associated with hospitalizations for the United States published on the CDC's WISQARS website. See Appendix 9 for average cost estimates by mechanism and intent.
 - Non-fatal injury costs for ED visits were calculated by multiplying the number of ED visits by the average cost associated with ED visits for the United States published on the CDC's WISQARS website. See Appendix 10 for average cost estimates by mechanism and intent.
 - Total injury costs were calculated by adding the estimated costs for injury deaths, hospitalizations and ED visits.
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APPENDIX 3: LIMITATIONS OF INJURY SURVEILLANCE DATA

Death Certificate Data:

- The cause of death reported on the death certificate is based on the underlying cause of death determined by a physician or coroner. While physicians and coroners are well trained to investigate and determine causes of death, a standardized process for investigating and determining causes of death does not exist in Ohio. This lack of uniformity may lead to differences in how underlying causes of death are classified and pose limitations for comparing rates across local jurisdictions.

Hospital Discharge Data:

- In each year of the study period, approximately 30 percent of injuries treated in the as inpatients and emergency departments were not assigned an external cause code (E-code). This most likely resulted in an underestimate of total costs and incidence rates, because not all mechanism and intents for injuries could be identified and included in the analysis by mechanism.
- Of the non-fatally injured, only those who sought medical care were captured for this analysis.
- Discharges, not individuals, were the unit of measurement, thereby resulting in duplication when readmissions for the same initial event occurred. The inclusion of readmissions would lead to an overestimate of incidence rates.
- Race and ethnicity are largely incomplete in the hospital discharge data and were not included in the analysis.
- Ohio residents treated in out-of-state hospitals are not consistently included, thereby affecting rates, particularly of border counties.
- Severity of injury is assumed based on type of medical treatment received (i.e., inpatient treatment is for more severe injuries than ED visits).

Behavioral Risk Factor Data:

- Data from the Pregnancy Risk Assessment Monitoring System (PRAMS), Ohio Youth Risk Behavior Survey (YRBS) and Behavioral Risk Factor Surveillance System (BRFSS) are based on self-reported behaviors by respondents. The accuracy of self-reported data depends on the respondents' ability to recall and willing to report the information. Self-reported data can lead to overestimates or underestimates of the true prevalence in the population depending on the topic being asked.
 - Results from Ohio YRBS represent a random sample of students enrolled in high schools in Ohio. The results do not represent high school age youth who have dropped out of school.
 - Results from the Ohio BRFSS represent a random sample of non-institutionalized adults ages 18 or older in Ohio with a landline in their home. The BRFSS excludes institutionalized adults and adults living in cell phone only households.
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APPENDIX 4: EXTERNAL CAUSE OF INJURY CODING FOR ICD-10-CM

Mechanism	Intent				
	Unintentional	Suicide	Homicide	Undetermined	Legal intervention
All injury	V01–X59, Y85–Y86	*U03, X60–X84, Y87.0	*U01–*U02, X85–Y09, Y87.1	Y10–Y34, Y87.2, Y89.9	Y35–Y36, Y89(.0,.1)
Cut or pierce	W25–W29, W45, W46	X78	X99	Y28	Y35.4
Drowning	W65–W74	X71	X92	Y21	...
Fall	W00–W19	X80	Y01	Y30	...
Fire or hot object or substance	X00–X19	X76–X77	*U01.3, X97–X98	Y26–Y27	Y36.3
Fire or flame	X00–X09	X76	X97	Y26	...
Hot object or substance	X10–X19	X77	X98	Y27	...
Firearm	W32–W34	X72–X74	*U01.4, X93–X95	Y22–Y24	Y35.0
Machinery	W24, W30–W31	...	...	...	...
All transport	V01–V99	X82	*U01.1, Y03	Y32	Y36.1
Motor vehicle traffic	[V02–V04](.1,.9), V09.2, [V12–V14](.3–.9), V19(.4–.6), [V20–V28](.3–.9), [V29–V79](.4–.9), V80(.3–.5), V81.1, V82.1, [V83–V86](.0–.3), V87(.0–.8), V89.2	...	...	...	...
Occupant	[V30–V79](.4–.9), [V83–V86](.0–.3)	...	...	...	...
Motorcyclist	[V20–V28](.3–.9), V29(.4–.9)	...	...	...	...
Pedal cyclist	[V12–V14](.3–.9), V19(.4–.6)	...	...	...	...
Pedestrian	[V02–V04](.1,.9), V09.2	...	...	...	...
Other	V80(.3–.5), V81.1, V82.1	...	...	...	...
Unspecified	V87(.0–.8), V89.2	...	...	...	...
Pedal cyclist, other	V10–V11, [V12–V14](.0–.2), V15–V18, V19(.0–.3,.8,.9)	...	...	...	...
Pedestrian, other	V01, [V02–V04](.0), V05, V06, V09(.0–.1,.3,.9)	...	...	...	...
Other land transport	[V20–V28](.0–.2), [V29–V79](.0–.3), V80(.0–.2,.6–.9), [V81–V82](.0,.2–.9), [V83–V86](.4–.9), V87.9, V88(.0–.9), V89(.0,.1,.3,.9)	X82	Y03	Y32	...
Other transport	V90–V99	...	*U01.1	...	Y36.1
Natural or environmental	W42–W43, W53–W64, W92–W99, X20–X39, X51–X57	...	...	...	...
Overexertion	X50	...	...	...	...
Poisoning	X40–X49	X60–X69	*U01(.6–.7), X85–X90	Y10–Y19	Y35.2
Struck by or against	W20–W22, W50–W52	X79	Y00, Y04	Y29	Y35.3
Suffocation	W75–W84	X70	X91	Y20	...
Other specified, classifiable	W23, W35–W41, W44, W49, W85–W91, Y85	*U03.0, X75, X81	*U01(.0,.2,.5), X96, Y02, Y05–Y07	Y25, Y31	Y35(.1,.5), Y36(.0,.2,.4–.8)
Other specified, NEC	X58, Y86	X83, Y87.0	*U01.8, *U02, Y08, Y87.1	Y33, Y87.2	Y35.6, Y89(.0–.1)
Unspecified	X59	*U03.9, X84	*U01.9, Y09	Y34, Y89.9	Y35.7, Y36.9

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APPENDIX 5: EXTERNAL CAUSE OF INJURY CODING FOR ICD-9-CM

Mechanism or cause	Manner or intent				
	Unintentional	Suicide	Homicide	Undetermined	Other
Cut or pierce	E920(.0-.9)	E956	E966	E986	E974
Drowning or submersion	E830(.0-.9), E832(.0-.9), E910(.0-.9)	E954	E964	E984	...
Fall	E880.0-E886.9, E888	E957(.0-.9)	E968.1	E987(.0-.9)	...
Fire or burn	E890.0-E899, E924(.0-.9)	E958(.1-.2, .7)	E961, E968(.0, .3)	E988(.1-.2, .7)	...
<i>Fire or flame</i>	E890.0-E899	E958.1	E968.0	E988.1	...
<i>Hot object or substance</i>	E924(.0-.9)	E958(.2, .7)	E961, E968.3	E988(.2, .7)	...
Firearm	E922(.0-.9)	E955(.0-.4)	E965(.0-.4)	E985(.0-.4)	E970
Machinery	E919(.0-.9)	...	...	...	...
MV traffic	E810-E819 (.0-.9)	E958.5	...	E988.5	...
<i>Occupant</i>	[E810-E819] (.0-.1)	...	...	...	...
<i>Motorcyclist</i>	[E810-E819] (.2-.3)	...	...	...	...
<i>Pedal cyclist</i>	E810-E819 (.6)	...	...	...	...
<i>Pedestrian</i>	E810-E819 (.7)	...	...	...	...
<i>Unspecified</i>	E810-E819 (.9)	...	...	...	...
Pedal cyclist, other	[E800-E807](.3), [E820-E825] (.6); E826(.1, .9); [E827-E829] (.1)	...	...	...	...
Pedestrian, other	[E800-E807](.2), [E820-E825] (.7), [E826-E829](.0)	...	...	...	...
Transport, other	[E800-E807](.0,.1,.8-.9), [E820-E825](.0-.5,.8-.9), E826(.2-.8), [E827-E829](.2-.9), E831(.0-.9), E833.0-E845.9	E958.6	...	E988.6	...
Natural or environmental	E900.0-E909, E928(.0-.2)	E958.3	...	E988.3	...
<i>Bites and stings</i>	E905(.0-.6,.9); E906(.0-.4,.9)	...	...	...	...
Overexertion	E927	...	...	...	...
Poisoning	E850.0-E869.9	E950.0-E952.9	E962(.0-.9)	E980.0-E982.9	E972
Struck by or against	E916-E917.9	...	E960.0, E968.2	...	E973, E975
Suffocation	E911-E913.9	E953(.0-.9)	E963	E983(.0-.9)	...
Other specified, classifiable	E846-E848, E914-E915, E918, E921(.0-.9), E923(.0-.9), E925.0-E926.9, E929(.0-.5)	E955(.5,.9), E958(.0,.4)	E960.1, E965(.5-.9), E967(.0-.9), E968.4	E985.5, E988(.0,.4)	E971, E978, E990-E994, E996, E997(.0-.2)
Other specified, not elsewhere classifiable	E928.8, E929.8	E958.8, E959	E968.8, E969	E988.8, E989	E977, E995, E997.8, E998, E999
Unspecified	E887, E928.9, E929.9	E958.9	E968.9	E988.9	E976, E997.9
All injury	E800-E869, E880-E929	E950-E959	E960-E969	E980-E989	E970-E978, E990-E999

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Appendix 6: Fatal Injury Mechanism Subcategories

Mechanism:	ICD-10 Codes:
Drug Poisoning	
Drug Types	
Heroin	T40.1
Methadone	T40.3
Cocaine	T40.5
All opioids	T40.0-T40.4, T40.6
Prescription opioids	T40.2-T40.4, T40.6
Barbituates	T42.3
Benzodiazepine	T42.4
Other and unspecified	T50.9
Motor Vehicle Traffic Crashes:	
Occupant injured	
Pedestrian	V02-V04 (0.1), V09.2, V09.3
Pedal cycle	V10-18 (0.4, 0.5, and 0.9), V19 (0.4-0.9)
Motorcycle	V20-28 (0.4, 0.5, and 0.9), V29 (0.4-0.9)
Three wheeled vehicle	V30-38 (0.5-0.9), V39 (0.4-0.9)
Car	V40-48 (0.5-0.9), V49 (0.4-0.6)
Pickup truck or van	V50-58 (0.5-0.9), V59 (0.4-0.6)
Heavy transport vehicle	V60-68 (0.5-0.9), V69 (0.4-0.6)
Bus	V70-78 (0.5-0.9), V79 (0.4-0.6)
Other or unspecified	V80-88 (0.0-0.3), V89 (0.2-0.3)
Falls:	
Same level	W01 and W03
Carried by other persons	W04
Wheelchair	W05
Bed	W06
Chair	W07
Other furniture	W08
Playground	W09
Stairs or steps	W10
Ladder or scaffolding	W11 and W12
From/out of building	W13
Tree	W14
Cliff	W15
Jumping or diving in water (not drowning)	W16
Other fall from different level	W17
Other fall from same level	W18
Unspecified	W19
Pedestrian:	
Motor vehicle traffic	V00-V05 (0.1), V09.2, V09.3
Non-motor vehicle traffic	V00-V05 (0.0), V09.0, V09.1
Unspecified	V00-V05 (0.9), V09.9
Pedal Cycle:	
Motor vehicle traffic	V10-V19 (0.4, 0.5, and 0.9)

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Non-motor vehicle traffic	V10-V19 (0.0-0.2)
Suffocation:	
In bed	W75
Other suffocation	W76
Cave-in, falling earth	W77
Inhalation of gastric contents	W78
Ingestion of food	W79
Ingestion of other objects	W80
Low oxygen environment	W81
Other specified	W83
Unspecified	W84
Drowning:	
Bath tub	W65 and W66
Swimming pool	W67 and W68
Natural body of water	W69 and W70
Other	W73
Unspecified	W74
Fire and burns:	
Uncontrolled fire	X00 and X01
Controlled fire	X02 and X03
Flammable material	X04
Nightwear	X05
Other clothing	X06
Other fire	X07
Unspecified fire	X08
Hot water	X09
Other hot fluids	X11
Household appliances	X12
Hot heating appliances	X15
Other hot metals	X16
Unspecified substance	X19
Suicide	
Poisoning	X60-69
Hanging	X70
Drowning	X71
Firearm	X72-74
Explosive material	X75
Smoke, fire, or flames	X76
Steam or hot vapors	X77
Sharp or blunt object	X78-79
Jumping	X80-81
Motor vehicle crash	X82
Other means	X83
Unspecified means	X84
Sequelae of suicide	Y87.0

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Homicide	
Drugs or biologic substances	X85
Gases or vapors	X88
Unspecified chemicals	X89
Hanging	X91
Drowning	X92
Firearm	X93-95
Explosive material	X96
Smoke, fire, or flames	X97
Sharp object	X98
Blunt object	X99
Pushing	Y01-02
Motor vehicle crash	Y03
Bodily force	Y04
Neglect or abandonment	Y06
Other maltreatment	Y07
Other specified means	Y08
Unspecified means	Y09
Sequelae of assault	Y87.1
Traumatic Brain Injury:	
Motor vehicle traffic crash	V30-79 (0.4-0.9), V81-82 (0.1), V83-86 (0.0-0.3), V20-28 (0.0-0.3), V29 (0.4-0.9), V12-14 (0.3-0.9), V19 (0.4-0.6), V02.1, V02.9, V04.1, V04.9, V09.2, V80 (0.3-0.5), V87(0.0-0.8), V89.2
Falls	W00-19
Pedestrian	V01-09
Pedal cycle	V10-19
Homicide	X85-Y09
Suicide	X60-84

Appendix 7: Hospitalization and ED Visit Injury Mechanism Subcategories

Mechanism:	ICD-9 Codes:
Drug Poisoning	
Drug Types	
Tranquilizers	967x, 969.1-969.3, 969.5, E852.0-E9852.5, E852.8, E852.9, E853.0, E853.1, E853.8, E853.9, E937, E937.1, E937.2, E937.4-E937.6, E937.8, E937.9, E939.1-E939.3, E939.5, E950.2, E950.3, E980.2, and E980.3
Barbituates	304.1, 304.10, 304.11, 304.4, 304.40-304.42, 967.0, E851, E937.0, E950.1, E980.1
Methadone	965.02, E850.1, E935.1
Benzodiazepines	969.4, E853.2, E939.4
Alcohol	291.81, 303.0, 303.00-303.02, 303.9, 303.90-303.93, 305.0, 305.00-305.02, 790.3, 980, 980.0, 980.9, E860, E860.0, E860.1, E860.9, V79.1
Cocaine	304.2, 304.20-304.22, 305.6, 305.60-305.62, 968.5, E855.2, E938.5
All Opioids	304.0, 304.00-304.02, 304.7, 304.70-304.72, 305.5, 305.50, 965.0, 965.00-965.02, 965.09, 965.8, E850.0-E850.2, E850.8, E935.0-E935.2, E935.8
Prescription Opioids	304.0, 304.00-304.02, 304.7, 304.70-304.72, 305.5, 305.50, 965.0, 965.02, 965.09, 965.8, E850.0-E850.2, E850.8, E935.0-E935.2, E935.8
Motor Vehicle Traffic Crashes by nature of accident	
Collision with train	E810
Re-entrant collision with other MV	E811
Collision with other MV	E812
Collision with other non-motor Vehicle	E813
Collision with pedestrian	E814
Collision on highway	E815
Loss of control, not on highway	E816
Noncollision while boarding or Alighting	E817
Other noncollision	E818
Unspecified	E819

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Motor Vehicle Traffic Crashes by occupant injured	
Driver	
Passenger	E810-E819 (.0)
Motorcyclist	E810-E819 (.1)
Motorcycle passenger	E810-E819 (.2)
Street car occupant	E810-E819 (.3)
Occupant of animal drawn vehicle	E810-E819 (.4)
Pedal cyclist	E810-E819 (.5)
Pedestrian	E810-E819 (.6)
Other specified person	E810-E819 (.7)
Unspecified person	E810-E819 (.8)
Falls:	
Steps or stairs	E880
Ladders or scaffolding	E881
Building or other structure	E882
Hole or other opening	E883
From one level to another	E884
Fall from same level	E885
Other or unspecified	E886
Hip Fracture:	820 in any discharge diagnosis field
Pedestrian and Pedal Cycle:	
Motor vehicle traffic	E810-819
Non-motor vehicle traffic	E820-825
Railway	E800-809
Other road vehicle	E826-829
Sports and Recreation:	
Sports, no mention of wheels	E886.0, E917.0, E917.5
Recreation, no mention of wheels	E849.4, E883.0, E884.0, E885.3, E885.4, E902.2, E910.0-E910.2, E922.2, E922.4, E922.5, E987.2
Recreation, wheels	E885.0-E885.2
Suffocation:	
Food objects	E911
Non-food objects	E912
Mechanical suffocation	E913
Drowning:	
Accidental drowning	E910
Watercraft causing submersion	E830
Other water transport	E832

Burden of Injury in Ohio, 2000-2010

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Fire or burn:	
Conflagration	E890-892
Ignition of objects	E893-894
Controlled fire	E895-897
Other fire	E898
Unspecified fire	E899
Hot object	E924
Self-harm:	
Poisoning	E950-952
Hanging	E953
Drowning	E954
Firearms	E955
Cutting or piercing	E956
Jumping	E957
Other and unspecified	E958
Late affects	E959
Assaults:	
Fight or brawl	E960.0
Rape	E960.1
Corrosive substance	E961
Poisoning	E962
Hanging	E963
Drowning	E964
Firearms	E965
Cutting or piercing	E966
Perpetrator of abuse	E967
Other and unspecified	E968
Late affects of assault	E969
Traumatic Brain Injury:	
Falls	E880-888
Motor vehicle traffic crashes	E810-819
Motor vehicle non-traffic crashes	E820-829
Pedal cycle	E800-809(0.3), E810-825(0.6), E826.1, E829.1, E827.1, E828.1, E829.1
Pedestrian	E800-809(0.2), E810-825(0.7), E826.0, E827.0, E828.0, E829.0
Assaults	E960-969
Self-harm	E950-959
Sports and recreation	E886.0, E917.0, E917.5
Struck by/against	E849.4, E883.0, E884.0, E885.3, E885.4, E902.2, E910.0-E910.2, E922.2, E922.4, E922.5, E987.2
	E885.0-E885.2
	E916, E917

Appendix 8: Fatal Injury Costs

Average costs associated with fatal injuries by intent and mechanism, Ohio, 2005 U.S. dollars

Intent	Medical Care	Work Loss
Unintentional	11,634	837,333
Suicide	2,926	1,064,570
Homicide	6,901	1,362,975
Undetermined	6,804	989,746
Legal Intervention	4,755	1,321,443
Unintentional mechanisms		
Falls	20,728	251,529
MV traffic	9,547	1,095,338
Drowning	3,905	1,127,124
Fire/burn	19,095	780,015
Poisoning	3,957	1,191,574
Pedal	17,645	1,118,621
Pedestrian	11,972	987,488
Suffocation	14,259	540,573
All intents		
Traumatic brain injuries	6,433	465,960
Firearms	3,769	1,160,514

Appendix 9: Injury Hospitalization Costs

Average costs associated with injury hospitalizations by intent and mechanism, United States, 2005

Intent	Medical Care	Work Loss
Unintentional	21,996	47,781
Suicide	8,183	17,012
Homicide	20,154	119,478
Undetermined		
Legal Intervention	16,807	72,992
Unintentional mechanisms		
Falls	19,672	35,628
MV traffic	40,825	79,625
Drowning	35,106	283,010
Fire/burn	18,247	51,981
Poisoning	9,621	3,024
Pedal	39,672	96,557
Pedestrian	42,814	87,372
Suffocation	37,898	25,925
All intents		
Traumatic brain injuries	61,017	99,667
Firearms	14,716	79,615

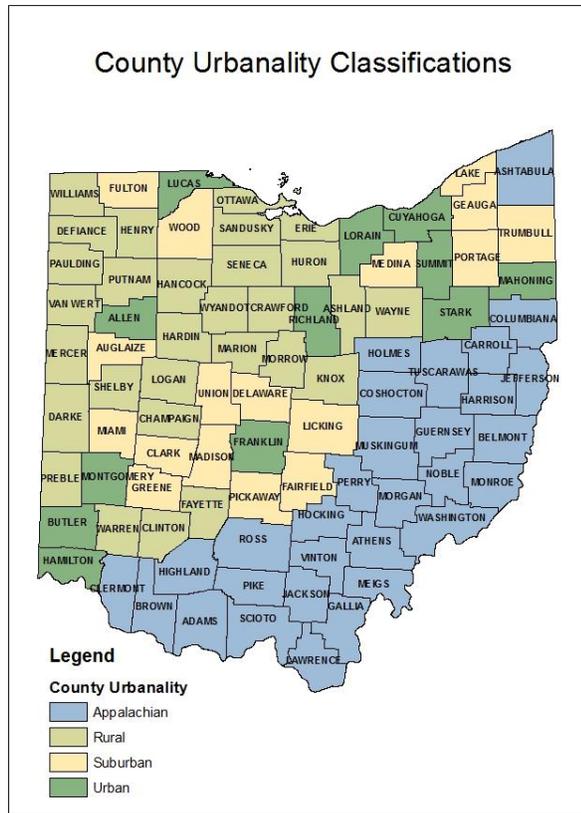
Appendix 10: Injury Emergency Department Visit Costs

Average costs associated with injury ED visits by intent and mechanism, United States, 2005

Intent	Medical Care	Work Loss
Unintentional	786	2,877
Suicide	959	3,086
Homicide	1,187	868
Legal Intervention	946	2,634
Unintentional mechanisms		
Falls	954	456
MV traffic	661	2,922
Drowning	676	556
Fire/burn	517	1,108
Poisoning	1,186	3,255
Pedal	1,035	3,496
Pedestrian	1,087	2,597
Suffocation	931	2,775
All intents		
Traumatic brain injuries	1,650	8,610
Firearms	849	3,200

Appendix 11: County Urbanity Classifications

The map describes county urbanity classification used in this report. Counties were classified as urban if they had an urban core that served as a center of economic activity for surrounding counties. Counties were considered suburban if they were located adjacent to an urban county and strongly connected with economic activity in the urban county. Rural counties do not have an urban core and not strongly connected to an adjacent urban county. The Appalachian classification was based on the Appalachian Development Commission with the exception of Mahoning and Trumbull counties. Mahoning County was classified as an urban county and Trumbull was considered to be a suburban county in the report.



Appendix 12: 2010 Federal Poverty Guidelines

Family Size:	Annual Household Income Threshold		
	Below Poverty	Less than 200% above poverty	200% or more above poverty
1	\$10,830	\$10,831-21,659	\$21,660+
2	\$14,570	\$14,571-29,139	\$29,140+
3	\$18,310	\$18,131-36,259	\$36,260+
4	\$22,050	\$22,051-44,009	\$44,100+
5	\$25,790	\$25,791-51,579	\$51,580+
6	\$29,530	\$29,531-59,059	\$59,060+
7	\$33,270	\$33,271-66,539	\$66,540+
8	\$37,010	\$37,011-74,019	\$74,020+